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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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[REDACTED] EXAMINER

ORTIZ, JORGE L

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2697

DATE MAILED: 07/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|----------------------|----------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/842,098 | VEZENOV ET AL. |
| | Examiner | Art Unit |
| | Jorge L Ortiz-Criado | 2697 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 January 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Reference number "15" in page 2, line 4.

Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Specification

3. The disclosure is objected to because of the following informalities:
-On page 1, line 4-5, the "U.S. Provisional Patent Application Serial No. _____" should be "U.S. Provisional Patent Application Serial No. 60/285497."

-On page 11, lines 24-25, the "U.S Patent Application Serial No. _____" should be "U.S Patent Application Serial No. 09/842214"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-15, and 17-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Guerra U.S. Patent No. 6,115,348.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Guerra discloses an optical data storage medium (See Abstract) comprising:

a storage layer having one or more data storage tracks thereon which define a data track pitch (See col. 6, lines 7-18; col. 6, lines 48-64; Figs. 8,11), and

a micro-lens array positioned proximate to said one or more data storage tracks (See col. 10, lines 6-20; Figs. 19,20),

wherein said micro-lens array comprises a periodic structure defining at least first and second repeating periods (See Figs.19,20),and

wherein said periodic structure induces a virtual track (i.e. "micro-optical elements have regular alternating perturbations of their topographical geometrical characteristics so as to introduce a period into overall disk structure that is larger than the size of the actual data track pitch") having a pitch which is different than said data track pitch (See col. 6, lines 49-64; col. 10, lines 6-20; Figs. 11, 19, 20).

Regarding claim 2, Guerra discloses wherein said micro-lens array comprises first and second interleaved lenses (See Figs. 19,20).

Regarding claim 3, Guerra discloses wherein said interleaved lenses are spiral lenses (See col. 3, lines 21-34)

Regarding claim 4, Guerra discloses wherein said first lens is taller than said second lens
(See col. 10, lines 6-20; Fig. 19).

Regarding claim 5, Guerra discloses wherein said first lens is wider than said second lens
(See col. 10, lines 6-20; Fig. 20).

Regarding claim 6, Guerra discloses wherein said first lens is disposed a first distance
from said second lens in a first direction and said first lens is disposed a second distance from
said second lens in a second direction (See col. 10, lines 6-20; Figs. 19,20).

Regarding claim 7, Guerra discloses wherein said micro-lens array comprises a single
lens (See col. 3, lines 21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 8, Guerra discloses wherein said lens is a spiral lens (See col. 3, lines
21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 9, Guerra discloses wherein a portion of said spiral lens located between
first and second adjacent portions is disposed a first distance from an adjacent portion in a first
direction and is disposed a second distance from an adjacent portion in a second direction (See
col. 3, lines 21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 10, Guerra discloses wherein a first portion of said single spiral lens is taller than a second portion of said single spiral lens (See col. 3, lines 21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 11, Guerra discloses wherein a first portion of said single spiral lens is wider than a second portion of said single spiral lens (See col. 3, lines 21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 12, Guerra discloses wherein said micro-lens array comprises a series of concentric circular lenses (See col. 3, lines 21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 13, Guerra discloses wherein a first portion of said lenses have a first height and a second portion of said lenses have a second height (See col. 3, lines 21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 14, Guerra discloses wherein a first portion of said lenses have a first width and a second portion of said lenses have a second width (See col. 3, lines 21-34; col. 10, lines 6-20; Figs. 19,20).

Regarding claim 15, Guerra discloses an optical storage device (See Abstract) comprising:

a far field optical pick-up unit (See Fig. 1,11,12,13)

and an optical data storage medium (See Fig. 1,11,19,20), said optical data storage medium comprising:

a storage layer (See col.6, lines 7-19; col. 6, lines 48-64; col. 10, lines 6-20; Figs. 11,19,20); and

a plurality of adjacent track portions for storing optical artifacts on said storage layer (See col.6, lines 7-19; col. 6, lines 48-64; Figs. 11),

wherein said track portions define a radial track pitch of $N/2$ microns (See col.6, lines 7-19; col. 11, lines 48-64; Figs. 11—"distance between track 93 and 94"), and wherein said optical artifacts are readable by an optical drive configured for tracking an N micron track pitch (See col.6, lines 7-19; col. 6, lines 48-64; col. 10, lines 6-20; Figs. 11,19,20).

Regarding claim 17, Guerra discloses wherein said plurality of adjacent track portions are formed from two interleaved spiral tracks (See col. 3, lines 21-34).

Regarding claim 18, Guerra discloses wherein said plurality of adjacent track portions are formed from a plurality of unconnected concentric circular tracks (Inherent to Guerra).

Regarding claim 19, Guerra discloses wherein said plurality of adjacent track portions are formed from a single spiral track (See col. 3, lines 21-34).

Regarding claim 20, Guerra discloses wherein at least some of said adjacent track portions are positioned beneath a micro-lens superstructure (See col. 10, lines 6-20; Figs. 19,

20), and wherein different portions of said superstructure over different adjacent tracks have different physical characteristics (See col.6, lines 7-64; col. 10, lines 6-20; Figs. 11,19,20).

Regarding claim 21, Guerra discloses an optical storage medium (See Fig. 1,11,19,20) comprising:

a first track for recording optical artifacts having a track pitch of N microns (See col.6, lines 7-19; col. 11, lines 48-64; Fig. 11-“i.e. track 93”);

a second track for recording optical artifacts having a track pitch of N microns (See col.6, lines 7-19; col. 11, lines 48-64; Fig. 11-“i.e. track 94”);

wherein said first track and said second track are interleaved such that there is an average track pitch of $N/2$ microns between said first and second tracks (See col.6, lines 7-19; col. 11, lines 48-64; Fig. 11-“i.e. distance between center of track 93 and 94”).

Regarding claim 22, Guerra discloses wherein said first track is disposed a first distance from said second track in a first direction and said first track is disposed a second distance from said second track in a second direction (See col.6, lines 7-19; col. 11, lines 48-64; Fig. 11);

Regarding claim 23, Guerra discloses wherein said first and second tracks are positioned beneath a first and second micro-lens, respectively (See col. 10, lines 6-20; Figs. 19, 20).

Regarding claim 24, Guerra discloses wherein said first micro-lens has a first height and said second track has a second height (See col. 10, lines 6-20; Figs. 19).

Regarding claim 25, Guerra discloses wherein said first micro-lens has a first shape and said second micro-lens has a second shape (See col. 10, lines 6-20; Figs. 19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being obvious over Guerra U.S. Patent No. 6,115,348 in view of Guerra 5,910,940.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in

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accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Guerra (348) discloses all the limitations based on claim 15 as outlined above. But Guerra (348) does not expressly disclose wherein N is approximately 0.74 micrometers.

However this feature is well known in the art as evidenced by Guerra (940), which discloses wherein N is approximately 0.74 micrometers (See col. 15 lines 40-42).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to having N approximately 0.74 micrometers in order to obtain the new DVD format as teaches by Guerra (940).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 6,094,413 to Guerra, which discloses an optical storage medium with a microlens array.
- b. U.S. Patent No. 5,754,514 to Guerra, which discloses an optical storage medium with microlens array.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm), Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HOFASS R JEFFERY can be reached on (703) 305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6743 for regular communications and (703) 308-6743 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

joc
June 24, 2003



Richemond D.
Primary Examiner